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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,864	06/14/2005	Michael Jacob	SMB-PT145 (PC 04 015 B US	5720
3624 7590 08/22/2008 VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			EXAMINER HWU, DAVIS D	
			ART UNIT 3752	PAPER NUMBER
			MAIL DATE 08/22/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/538,864

**Applicant(s)**

JACOB ET AL.

**Examiner**

Davis D. Hwu

**Art Unit**

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5 and 7-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/CDC)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

1. Applicant's amendment and arguments of July 8, 2008 have been entered.
2. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

4. Claims 1-4 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yie (US Patent 4,478,368) in view of Lee et al.

Yie '368 discloses a spray nozzle comprising a cylindrical nozzle body and a nozzle mouth piece; the nozzle body includes a centrally arranged inner tube 20 and an outer tube 86 as recited; the inner tube being connected to a supply of substance to be sprayed and the outer tube being connected to another supply and forms a lance base in a bottom region; and the inner tube is mounted in a receiving block 14 which is detachably attached in a tube 63 arranged in a fixed manner on a lower region of the lance base and which can be removed from the tube as recited and parts attached to the inner tube being easily dis-assembled and re-assembled (such as collar 15), and an attachment device which connects the nozzle detachably to a processing housing 81. Lee et al. teaches using a tri-clamp attachment 9 to hold various parts together. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Yie by providing a tri-clamp attachment to detachably connect the nozzle to the processing housing as taught by Lee et al. Yie

does not disclose the inner tube being connected to a substance as recited or the outer tube being connected to a supply of gas, however, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Regarding claims 2 and 3, since Yie also discloses an o-ring seal 67, placing seals at the locations as recited would have been obvious matters of design choice through the teaching of Yie. Yie also discloses an insert 75 as recited in claim 4, and making the insert exchangeably connected using a metal seal set would have been a matter of design choice as would have been making the outer tube to be detachable from the lance base as recited in claim 7, since Yie has already disclosed the capability to detach various parts of the device.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yie (US Patent 4,478,368) in view of Sun et al.

Yie discloses the structural limitations of the instant invention including a nozzle mouth piece 40, wherein in the region of the piece 40, an add-on part 30 guiding the inner tube 20 is arranged in an annular gap between the outer tube 86 and the inner tube 20 and is rigidly connected to the outer tube. Sun et al. teaches a nozzle for spraying liquid substances comprising a swirl body 3. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Yie by providing a swirl body as has already been taught by Sun et al.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis D. Hwu whose telephone number is 571-272-4904. The examiner can normally be reached on 8:00-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571-272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is

available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Davis D Hwu/  
Primary Examiner, Art Unit 3752